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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,454	12/28/2001	Eleanor P. Rabadam	42P12397	1055

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EXAMINER

NGUYEN, THINH T

ART UNIT PAPER NUMBER

2818

DATE MAILED: 11/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/039,454

Applicant(s)

RABADAM ET AL.

Examiner

Thinh T Nguyen

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 14-21 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED OFFICE ACTION

### **Election/Restriction**

1. Applicant's election **with traverse** of claims 1-13 in Paper No. 7 is acknowledged.

Applicant is reminded that applicant 's application involves product and process Made; for example in applicant's application claim 1 and 14; these invention are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown:

(1) that the process can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process. In the instant case the claimed process in claim 14 can be used to make a high power semiconductor device in Du bois et al. (US patent 4518982); to make a heterolithic microwave in integrated impedance matching circuitry in Li (US patent 5696466); to make a leadless chip carrier for RF transistor in Benenati et al.(US patent 4783697) or to make electrical circuit and optical data bus in Gipson et al. (US patent 4732446).

These inventions are evidences to show that using applicant claimed process in claim 14 , one skill in the art can make at least four materially different products.

the evidences shown above demonstrate that the restriction is proper for the reason already mentioned in the last office action ( paper number 6); therefore;

the election has been treated as an election without traverse (MPEP § 818.03(a)).

Applicants have the right to file a divisional, continuation or continuation-in-part application covering the subject matter of the non-elected claims.

To reiterate, applicant's traversal is found not persuasive because the fields of search for method and device claims are NOT coextensive and the determinations of patentability of method and device claims are different, that is process limitations and device limitations are given weight differently in determining the patentability of the claimed inventions. Also, the strategies for doing text searching of the device claims and method claims are different. Thus, separate searches are required and will place a heavy administrative burden on the Office.

The requirement is still deemed proper and is therefore made **FINAL** and non-elected claims 14 to 21 will not be considered in this office action.

### ***Specification***

2. The title of the invention is objected to since due to the restriction/ election requirement of the application. A new title is required that is clearly indicative of the invention to which the claims are directed (see MPEP paragraph 606.01).

A title such as --" packages for a non-volatile memory device including integrated passive device "-- is suggested.

3. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant cooperation is requested

In correcting any errors of which the applicant may become aware in the specification.

***Claim Rejection – 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 is rejected under 35 U.S.C. 112 second paragraph as failing to set forth the subject matter which applicant regard as the invention.

There is no antecedent basis for “ first surface “; “ second surface “ in this claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b/e) that form the basis for the rejections under this section made in this office action.

A person shall be entitled to a patent unless ---

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 1, 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Berney (US Patent 5703395), Fukuoka (US patent 5818699) or Palmer (US patent 6008988).

Berney et al. disclose a non-volatile memory package (column 4 lines 28-29, fig 2) comprising: a substrate ( fig 2 reference 3) having a first surface and a second surface; an integrated circuit die including a memory array ( fig 2 reference 2 )mounted to the first surface of the substrate, and a passive component ( fig 2 reference 20) mounted to the second surface of substrate; similarly Fukuoka ( in fig 8) and Palmer (in fig 1) disclose the same invention as Berney.

8. Claims 3,9 are rejected under 35 U.S.C. 102(b/e) as being anticipated by Fukuoka (US patent 5818699), Lin et al. (US patent 5273938) or Zhao et al. (US patent application US 2002/0079562).

#### REGARDING CLAIM 3

Fukuoka ( the abstract fig. 14) ; Lin et al. (Fig.9, 10,11 column 7 line 20); and Zhao et al. (fig 14) show an array of solder bumps mounted to the substrate.

#### REGARDING CLAIM 9

Lin et al. (column 3 line 51), Fukuoka (column 16 line 4) and Zhao et al. (paragraph 78) all teach the use of epoxy glue.

9. Claims 4,5 are rejected under 35 U.S.C. 102(b/e) as being anticipated by Lin et al. (US patent 5273938) or Zhao et al. (US patent Application US 2002/0079562)

Lin et al. (fig. 9,10,11) and Zhao et al. (fig. 35) show the passive component is Located centrally within the array of solder balls and the solder balls are higher than the

passive component.

10. Claim 7,8 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al. (US patent 5273938).

Lin et al show the invention of a memory that have passive component in a cavity (Column 3 line 66) with the height less than the height of solder balls (fig 10).

11. Claim 11 is rejected under 35 U.S.C. 102(b/e) as being anticipated by Fukuoka (US patent 5818699) or Lin et al. (US patent 5273938).

Lin et al. (the title) and Fukuoka ( the abstract ) teach the mounting of passive material with conductive material.

12. Claim 12 is rejected under 35 U.S.C. 102(b/e) as being anticipated by Noda et al. (US patent 5841190) or Ahn et al. (US patent 6274937).

Noda (column 32 line 41) and Ahn et al. (column 6 line 60) teach the mounting of capacitor or inductor

13. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Berney (US patent 5703395).

Berney ( column 4 line 29) show a die of EEPROM which is flash memory

***Claim Rejections - 35 USC § 103***



14. The following is a quotation of U.S.C. 103(a) which form the basis for all obviousness rejections set forth in this office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

15. Claims 6, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (U.S. patent 5273938) or Fukuoka (U.S. patent 5818699) in view of further remark

#### REGARDING CLAIM 6

The incorporation of on chip voltage regulator has become an obvious routine skill for a person of ordinary skill in the art.

#### REGARDING CLAIM 10

Lin et al. and Fukuoka disclose all the invention except to specify the thickness of epoxy material, however this is just amount to a mere change of size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

In Re Rose 105 USPQ 237 (CCPA 1955)

16. When responding to the office action, applicants are advised to provide the examiner with the line numbers and the page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

17. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to be abandoned (see M.P.E.P. 710.02(b)).

### **CONCLUSION**

18. The prior arts made of record and not relied upon are considered pertinent to applicant disclosure: Manning (US patent 5596534) disclose a circuit including DRAM and voltage regulator and method of increasing speed of operation of a DRAM; Farooq et al. (US patent 6228682) disclose a multi-cavity substrate structure for discrete device; Fukiharu (US patent 6285559) disclose a multichip module.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thinh T Nguyen whose phone number is (703) 305-0421. The Examiner can normally be reached on Monday to Friday from 8.30 A.M. to 5.00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, David C. Nelms can be reached on (703) 308-4910. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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**Thinh T. Nguyen**

TTN

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**HOAI HO**  
**PRIMARY EXAMINER**